

- **How do the two lenses of a refracting telescope work?**
(The objective lens collects light from a distant object and focuses it into an upside-down image of the object. The eyepiece lens magnifies the image so it can be seen clearly.)
- **In your model telescope, what does the flashlight represent?**
(The flashlight represents a distant object in the sky that gives off light, such as the moon, a comet, a planet, or a star.)
- **What kinds of information can telescopes provide about the universe?**
(Telescopes can give information about the size, temperature, composition, and age of objects in the sky. They can also track the motion of the objects and help make predictions about future planetary events.)
- **In what way can a telescope be considered to be a time machine? (Hint: Think about how far away the objects in the sky are.)**
(A telescope can be considered to be a time machine because it shows us how the stars or other objects looked thousands of years ago. This is because the objects are so far away that the light takes that long to reach earth. To learn how those objects look today, we'd have to observe them thousands of years in the future.)
- **How could you make your telescope more effective or powerful?**
(You could use two magnifying lenses rather than a magnifying lens and a pair of glasses.)
- **How might scientists use what they learn about the universe to help them build better and stronger telescopes and other instruments?**
(One thing that scientists learn from using telescopes is what objects in the sky are made of. If an object gives off a special kind of light, for example, scientists might be able to build a telescope that is sensitive to just that kind of light. This new telescope would help them see that object more clearly and learn even more about it.)